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Abstract

Problem

To industrially recover thallium from thallium-containing glass scrap.

Solution

A method to recover thallium from thallium-containing glass scrap, characterized in that thallium-containing glass scrap is pulverized to a grain size of 300 μm or less, the resulting glass scrap is subjected to an extraction treatment with an inorganic acid (e.g., sulfuric acid) to precipitate inclusion metals such as copper and lead from the extraction solution, and a metal more noble than thallium is added to the extraction solution to precipitate out the metallic thallium.

Claims

1. A method to recover thallium from thallium-containing glass scrap, characterized in that thallium-containing glass scrap is pulverized to a grain size of 300 μm or less, the resulting glass scrap is subjected to an extraction treatment with an inorganic acid, and a metal more noble than thallium is added to the extraction solution to precipitate out the metallic thallium.

2. A method to recover thallium from thallium-containing glass scrap, characterized in that thallium-containing glass scrap is pulverized to a grain size of 300 μm or less, the resulting glass scrap is subjected to an extraction treatment with an inorganic acid to precipitate and remove inclusion metals from the extraction solution, and a metal more noble than thallium is added to the extraction solution to precipitate out the metallic thallium.

3. The method in Claim 1 or 2 in which the inorganic acid is sulfuric acid.

4. The method in Claim 3 in which the inorganic acid is sulfuric acid [sic].

5. The method in Claim 4 in which the metal more noble than thallium is zinc metal.

6. The method in Claim 5 in which the metal more noble than thallium is zinc metal [sic].